

References

- Ahroon, W.A., Hamernik, R.P., Lei, S.F., 1996. The effects of reverberant blast waves on the auditory system. *The Journal of the Acoustical Society of America* 100, 2247-2257.
- Alaska Fisheries Science Center (AFSC). Alaska Harbor Seal Haul-out Locations Mapper. Accessed at <https://www.fisheries.noaa.gov/inport/item/26760> on March 28, 2024.
- AFSC. 2023. Steller sea lion haulout and rookery locations in the United States. NOAA National Centers for Environmental Information. Accessed at <https://www.fisheries.noaa.gov/inport/item/17921> on November 22, 2023.
- American National Standards Institute (ANSI). 2013. *Acoustic Terminology (ANSI S1.1-2013)*. New York: Acoustical Society of America.
- ANSI. 2005. *Measurement of Sound Pressure Levels in Air (ANSI S1.13-2005)*. New York: Acoustical Society of America.
- ANSI. 1995. *Bioacoustical Terminology (ANSI S3.20-1995)*. Acoustical Society of America, Woodbury, NY.
- ANSI. 1986. *Methods of measurement for impulse noise 3 (ANSI S12.7-1986)*. Acoustical Society of America, Woodbury, NY.
- Archer, F.I., S.L. Mesnick, and A.C. Allen. 2010. Variation and predictors of vessel response behavior in a tropical dolphin community. NOAA Technical Memorandum NMFS-SWFSC-457, National Marine Fisheries Service, 60 p.
- Au, W.W.L. and M. Hastings. 2008. *Principles of Marine Bioacoustics*. Springer-Verlag, New York.
- Beauchamp, G. and B. Livoreil. 1997. The effect of group size on vigilance and feeding rate in spice finches (*Lonchura punctulata*). *Canadian Journal of Zoology* 75, 1526-1531.
- Berger ABAM. 2016. *Marine Mammal Monitoring Summary Report: Icy Strait Cruise Ship Terminal*. 27 p.
- Blecha, F. 2000. Immune system response to stress. In *The biology of animal stress: basic principles and implications for animal welfare*. (pp. 111-121). Wallingford UK: CABI Publishing.
- Bowers, M. T., A.S. Friedlaender, V. M. Janik, D. P. Nowacek, N. J. Quick, B. L. Southall, and A. J. Read. 2018. Selective reactions to different killer whale call categories in two delphinid species. *Journal of Experimental Biology* 221, jeb162479.
- Bradshaw, C. J., S. Boutin, and D. M. Heber. 1998. Energetic implications of disturbance caused by petroleum exploration to woodland caribou. *Canadian Journal of Zoology* 76, 1319-1324.
- Branstetter, B.K., Bowman, V.F., Houser, D.S., Tormey, M., Banks, P., Finneran, J.J., and Jenkins, K. 2018. Effects of vibratory pile driver noise on echolocation and vigilance in bottlenose dolphins (*Tursiops truncatus*). *J. Acoust. Soc. Am.* 1 January 2018; 143 (1): 429439. <https://doi.org/10.1121/1.5021555>
- California Department of Transportation (CALTRANS). 2020. *Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish*. , In: Molnar, M., Buehler, D., R. Oestman, J. Reyff, K. Pommerenck, B. Mitchell. (Ed.), *CALTRANS Compendium*, CALTRANS.

- CALTRANS. 2015. Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. , In: Molnar, M., Buehler, D., R. Oestman, J. Reyff, K. Pommerenck, B. Mitchell. (Ed.), CALTRANS Compendium, California Department of Transportation.
- Carlson, T., D. Woodruff, G. Johnson, N. Kohn, G. Ploskey, M. Weiland, J. Southard, and S. Southard. 2005. Hydroacoustic measurements during pile driving at the Hood Canal Bridge, September through November 2004, Battelle Marine Sciences Laboratory Sequim, WA.
- Carretta, J.V., E.M. Oleson, K.A. Forney, M.M. Muto, D.W. Weller, A.R. Lang, J. Baker, B. Hanson, A.J. Orr, J. Barlow, J.E. Moore, and R.L. Brownell Jr. 2022. U.S. Pacific Marine Mammal Stock Assessments: 2021. U.S. Department of Commerce. National Oceanic and Administrative Association Technical Memorandum NMFS-SWFSC-663.
- Casper, B.M., Halvorsen, M.B., Carlson, T.J., Popper, A.N., 2017. Onset of barotrauma injuries related to number of pile driving strike exposures in hybrid striped bass. *The Journal of the Acoustical Society of America* 141, 4380-4387.
- Casper, B.M., M.B. Halvorsen, F. Matthews, T.J. Carlson, and A.N. Popper. 2013. Recovery of barotrauma injuries resulting from exposure to pile driving sound in two sizes of hybrid striped bass. *PLoS ONE* 8 (9):e73844.
- Croll, D.A., C.W. Clark, J. Calambokidis, W.T. Ellison, and B.R. Tershy. 2001. Effect of anthropogenic low-frequency noise on the foraging ecology of Balaenoptera whales. *Animal Conservation* 4(1):13-27.
- Connor, R. C., and M. R. Heithaus. 1996. Approach by great white shark elicits flight response in bottlenose dolphins. *Marine Mammal Science* 12, 602-606.
- Cott, P.A., A.N. Popper, D.A. Mann, J.K. Jorgenson, and B.W. Hanna. 2012. Impacts of riverbased air gun seismic activity on northern fishes. *Advances in Experimental Medicine and Biology* 730:367-369.
- Daan, S., C. Deerenberg, and C. Dijkstra. 1996. Increased daily work precipitates natural death in the kestrel. *Journal of animal ecology*, 539-544.
- Dahlheim, M.E., P.A. White, J.M. Waite, and G. Eckert. 2009. Cetaceans of Southeast Alaska: Distribution and Seasonal Occurrence. *Journal of Biogeography* 36:410–426.
- Ellison, W.T., B. Southall, C.W. Clark, and A.S. Frankel. 2012. A new context-based Approach to assess marine mammal behavioral responses to anthropogenic sounds. *Conservation Biology* 26(1):21-28.
- England, G. R., D. Evans, C. Lautenbacher, C., S. Morrissey, and W. Hogarth. 2001. Joint interim report Bahamas marine mammal stranding event of 15-16 March 2000. US Department of Commerce, US Secretary of the Navy.
- Erbe, C., and J. A. Thomas. 2022. *Exploring Animal Behavior Through Sound: Volume 1: Methods*. Springer Nature.
- Everitt, R.D., C.H. Fiscus, and R.L. DeLong. 1980. Northern Puget Sound marine mammals. Interagency Energy/Environment R&D Program Report EPA-600/7-80-139, Prepared by National Marine Fisheries Service for Environmental Protection Agency 150p.

- Fair, P.A. and P.R. Becker. 2000. Review of stress in marine mammals. *Journal of Aquatic Ecosystem Stress and Recovery* 7 (4):335-354.
- Fay, R.R. 2009. Soundscapes and the sense of hearing of fishes. *Integrative Zoology* 4: 26-32.
- Fay, R.R., A.N. Popper, and J.F. Webb. 2008. Introduction to fish bioacoustics. In: Webb, J.F., R.R. Fay, and A.N. Popper, eds. *Fish Bioacoustics*. Springer Handbook of Auditory Research 32:1-15.
- Ferguson, M. C., Curtice, C., & Harrison, J. 2015. 6. Biologically Important Areas for cetaceans within U.S. waters – Gulf of Alaska coast region. In S. M. Van Parijs, C. Curtice, & M. C. Ferguson (Eds.), *Biologically Important Areas for cetaceans within U.S. waters* (pp. 65-78). *Aquatic Mammals (Special Issue)*, 41(1). 128 pp.
- Fewtrell, J.L., and R.D. McCauley. 2012. Impact of air gun noise on the behavior of marine fish and squid. *Marine Pollution Bulletin* 64: 984-993.
- Finneran, J. J. 2016. Auditory weighting functions and TTS/PTS exposure functions for marine mammals exposed to underwater noise, Space and Naval Warfare Systems Center Pacific San Diego United States.
- Finneran, J.J. 2015. Auditory weighting functions and TTS/PTS exposure functions for marine mammals exposed to underwater noise. Technical Report. San Diego: SPAWAR.
- Finneran, J.J., Schlundt, C.E., 2013. Effects of fatiguing tone frequency on temporary threshold shift in bottlenose dolphins (*Tursiops truncatus*). *The Journal of the Acoustical Society of America* 133, 1819-1826.
- Finneran, J.J., Carder, D.A., Schlundt, C.E., Dear, R.L., 2010. Growth and recovery of temporary threshold shift at 3 kHz in bottlenose dolphins: Experimental data and mathematical models. *The Journal of the Acoustical Society of America* 127, 3256-3266.
- Finneran, J.J., C.E. Schlundt, R. Dear, D.A. Carder, and S.H. Ridgway. 2002. Temporary shift in masked hearing thresholds in odontocetes after exposure to single underwater impulses from a seismic watergun. *Journal of the Acoustical Society of America* 111:2929-2940.
- Finneran, J.J., C.E. Schlundt, D.A. Carder, J.A. Clark, J.A. Young, J.B. Gaspin, and S.H. Ridgway. 2000. Auditory and behavioral responses of bottlenose dolphins (*Tursiops truncatus*) and a beluga whale (*Delphinapterus leucas*) to impulsive sounds resembling distant signatures of underwater explosions. *Journal of the Acoustical Society of America* 108:417-431
- Ford, J. K., and R. R. Reeves. 2008. Fight or flight: antipredator strategies of baleen whales. *Mammal Review* 38, 50-86.
- Friday, N. A., A. N. Zerbini, J. M. Waite, S. E. Moore, and P. J. Clapham. 2013. Cetacean distribution and abundance in relation to oceanographic domains on the eastern Bering Sea shelf in June and July of 2002, 2008, and 2010. *Deep-Sea Res. II* 94:244-256.
- Fritz, H., M. Guillemain, and D. Durant. 2002. The cost of vigilance for intake rate in the mallard (*Anas platyrhynchos*): an approach through foraging experiments. *Ethology Ecology & Evolution* 14, 91-97.
- Gomez, C., J. Lawson, A. J. Wright, A. Buren, D. Tollit, and V. Lesage. 2016. A systematic review on the behavioural responses of wild marine mammals to noise: the disparity between science and policy. *Canadian Journal of Zoology* 94, 801-819.

- Halvorsen, M.B., D.G. Zeddies, W.T. Ellison, D.R. Chicoine, and A.N. Popper. 2012a. Effects of midfrequency active sonar on hearing in fish. *Journal of the Acoustical Society of America* 131 (1):599-607.
- Halvorsen, M.B., B.M. Casper, C.M. Woodley, T.J. Carlson, and A.N. Popper. 2012b. Threshold for onset of injury in chinook salmon from exposure to impulsive pile driving sounds. *PLoS ONE* 7 (6).
- Harrington, F. H. and A. M. Veitch. 1992. Calving success of woodland caribou exposed to lowlevel jet fighter overflights. *Arctic*, 213-218.
- Hastings, K.M., M.J. Rehberg, G.M. O’Corry-Crowe, G.W. Pendleton, L.A. Jemison, and T.S. Gelatt. 2020. Demographic consequences and characteristics of recent population mixing and colonization in Steller sea lions, *Eumetopias jubatus*. *Journal of Mammalogy*. 101(1):107–120. DOI:10.1093/jmammal/gyz192.
- Hastings, M. C. and A. N. Popper. 2005. Effects of sound on fish, California Department of Transportation.
- Henderson, D., B. Hu, and E. Bielefeld. 2008. Patterns and mechanisms of noise-induced cochlear pathology. pp. 195-217 In Schacht, J., A.N. Popper, and R.R Fay (Eds.) *Auditory Trauma, Protection, and Repair*. New York: Springer.
- Holberton, R.L., Helmuth, B. and Wingfield, J.C., 1996. The corticosterone stress response in gentoo and king penguins during the non-fasting period. *Condor*, pp.850-854.
- Hood, L.C., Boersma, P.D. and Wingfield, J.C., 1998. The adrenocortical response to stress in incubating Magellanic penguins (*Spheniscus magellanicus*). *The Auk*, 115(1), pp.76-84.
- Houser, D.S., Yost, W. Burkard, R., Finneran, J.J., Reichmuth, C., and Mulsow, J. 2017. A review of the history, development and application of auditory weighting functions in humans and marine mammals. *J. Acoust. Soc. Am.* 1 March 2017; 141 (3): 13711413. <https://doi.org/10.1121/1.4976086>
- International Organization for Standardization (ISO), 2017. 1996 - 2:2017 Acoustics - Description, measurement, and assessment of environmental noise - Part 2: Determination of sound pressure levels, International Organization for Standardization.
- Jefferson, T.A., M.E. Dahlheim, A.N. Zerbini, J.M. Waite, and A.S. Kennedy. 2019. Abundance and seasonality of Dall’s porpoise (*Phocoenoides dalli*) in Southeast Alaska. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-385, 45p.
- Jemison L.A., G.W. Pendleton, L.W. Fritz, K.K. Hastings, J.M. Maniscalco, A.W. Trites, and T.S. Gelatt. 2013. Inter-population movements of Steller sea lions in Alaska with implications for population separation. *PLoS ONE* 8:e70167.
- Jessop, T.S., Tucker, A.D., Limpus, C.J. and Whittier, J.M., 2003. Interactions between ecology, demography, capture stress, and profiles of corticosterone and glucose in a free-living population of Australian freshwater crocodiles. *General and comparative endocrinology*, 132(1), pp.161170.
- Johnson, I. 2024. Telephone correspondence between Ian Johnson, Hoonah Indian Association and Emma Kimball, SolsticeAK regarding subsistence harvest near the project area on July 7, 2024.

- Jorgenson, J.K. and Gyselman, E.C., 2009. Hydroacoustic measurements of the behavioral response of arctic riverine fishes to seismic airguns. *The Journal of the Acoustical Society of America*, 126(3), pp.1598-1606.
- Kastak, D., J. Mulsow, A. Ghoul, and C. Reichmuth. 2008. Noise-induced permanent threshold shift in a harbor seal: Abstract. *Journal of the Acoustical Society of America* 123:2986.
- Kastak, D., Reichmuth, C., Holt, M.M., Mulsow, J., Southall, B.L., Schusterman, R.J., 2007. Onset, growth, and recovery of in-air temporary threshold shift in a California sea lion (*Zalophus californianus*). *The Journal of the Acoustical Society of America* 122, 2916-2924.
- Kastak, D., Schusterman, R., 1999. In-air and underwater hearing sensitivity of a northern elephant seal (*Mirounga angustirostris*). *Canadian Journal of Zoology* 77, 1751-1758.
- Kastelein, R.A., L. Helder-Hoek, L. N. Defiliet, L. V. Acoleyen, L. A. Huijser, and J. M. Terhune. 2022a. Temporary Hearing Threshold Shift in California Sea Lions (*Zalophus californianus*) Due to One-Sixth-Octave Noise Bands Centered at 0.6 and 1 kHz. *Aquatic Mammals* 48.
- Kastelein, R. A., L. Helder-Hoek, L. N. Defiliet, F. Kuiphof, L. A. Huijser, and J. M. Terhune. 2022b. Temporary Hearing Threshold Shift in California Sea Lions (*Zalophus californianus*) Due to One-Sixth-Octave Noise Bands Centered at 8 and 16 kHz: Effect of Duty Cycle and Testing the Equal-Energy Hypothesis. *Aquatic Mammals* 48.
- Kastelein, R. A., L. Helder-Hoek, L. N. Defiliet, L.A. Huijser, J. M. Terhune, and R. Gransier. 2021. Temporary Hearing Threshold Shift in California Sea Lions (*Zalophus californianus*) Due to One-Sixth-Octave Noise Bands Centered at 2 and 4 kHz: Effect of Duty Cycle and Testing the Equal-Energy Hypothesis. *Aquatic Mammals* 47.
- Kastelein, R. A., L. Helder-Hoek, S. Cornelisse, L. A. Huijser, and J. M. Terhune. 2019a. Temporary hearing threshold shift in harbor seals (*Phoca vitulina*) due to a one-sixth-octave noise band centered at 16 kHz. *The Journal of the Acoustical Society of America* 146, 31133122.
- Kastelein, R. A., L. Helder-Hoek, and R. Gransier. 2019b. Frequency of greatest temporary hearing threshold shift in harbor seals (*Phoca vitulina*) depends on fatiguing sound level. *The Journal of the Acoustical Society of America* 145, 1353-1362.
- Kastelein, R. A., L. Helder-Hoek, S. Cornelisse, L. A. Huijser, and R. Gransier. 2019c. Temporary hearing threshold shift in harbor porpoises (*Phocoena phocoena*) due to one-sixth octave noise band at 32 kHz. *Aquatic Mammals* 45, 549-562.
- Kastelein, R. A., Huijser, L. A., Cornelisse, S., Helder-Hoek, L., Jennings, N., & de Jong, C. A. 2019d. Effect of pile-driving playback sound level on fish-catching efficiency in harbor porpoises (*Phocoena phocoena*). *Aquatic Mammals*, 45(4), 398-410.
- Kastelein, R.A., Gransier, R., Schop, J., Hoek, L., 2015. Effects of exposure to intermittent and continuous 6–7 kHz sonar sweeps on harbor porpoise (*Phocoena phocoena*) hearing. *The Journal of the Acoustical Society of America* 137, 1623-1633.
- Kastelein, R. A., J. Schop, R. Gransier, and L. Hoek. 2014. Frequency of greatest temporary hearing threshold shift in harbor porpoises (*Phocoena phocoena*) depends on the noise level. *The Journal of the Acoustical Society of America* 136, 1410-1418.

- Krausman, P.R., L.K. Harris, C.L. Blasch, K.K.G. Koenen, and J. Francine. 2004. Effects of military operations on behavior and hearing of endangered Sonoran pronghorn. *Wildlife Monographs* 157:1-41.
- Kryter, K. D., 2013. *The effects of noise on man*. Elsevier.
- Kryter, K. D., W. D. Ward, and J. D. Miller. Eldredge, D.H., 1966. Hazardous exposure to intermittent and steady-state noise. *The Journal of the Acoustical Society of America* 39, 451464.
- Lankford, S.E., T.E. Adams, R.A. Miller, and J.J. Cech. 2005. The cost of chronic stress: Impacts of a nonhabituating stress response on metabolic variables and swimming performance in sturgeon. *Physiological and Biochemical Zoology* 78:599-609.
- Lusseau, D. and L. Bejder. 2007. The long-term consequences of short-term responses to disturbance experiences from whale watching impact assessment. *International Journal of Comparative Psychology* 201(2-3):228-236.
- Madsen, P.T., M. Johnson, P.J.O. Miller, N.A. Soto, J. Lynch, and P. Tyack. 2006. Quantitative measures of air-gun pulses recorded on sperm whales (*Physeter macrocephalus*) using acoustic tags during controlled exposure experiments. *Journal of the Acoustical Society of America* 120(4):2366-2379.
- Madsen, P. T. 2005. Marine mammals and noise: Problems with root mean square sound pressure levels for transients. *Journal of the Acoustical Society of America* 117, 3952-3957.
- Martien, K. K., B. L. Taylor, F. I. Archer, K. Audley, J. Calambokidis, T. Cheeseman, J. De Weerd, A. Frisch Jordán, P. Martínez-Loustalot, C. D. Ortega-Ortiz, E. M. Patterson, N. Ransome, P. Ruvelas, J. Urbán Ramírez, and F. Villegas-Zurita. 2021. Evaluation of Mexico Distinct Population Segment of Humpback Whales as units under the Marine Mammal Protection Act. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-SWFSC-658. DOI: doi.org/10.25923/nvw1-mz45
- Miller, J.D. 1974. Effects of noise on people. *Journal of the Acoustical Society of America* 56:729-764.
- Mitson, R. B. 1995. Underwater noise of research vessels: review and recommendations. ICES Cooperative Research Reports (CRR).
- Moberg, Gary P. "Biological response to stress: implications for animal welfare." In *The biology of animal stress: Basic principles and implications for animal welfare.*, pp. 1-21. Wallingford UK: CABI publishing, 2000.
- Moberg, G.P., 1987. A model for assessing the impact of behavioral stress on domestic animals. *Journal of Animal Science*, 65(5), pp.1228-1235.
- Mooney, T.A., Nachtigall, P.E., Breese, M., Vlachos, S., Au, W.W., 2009. Predicting temporary threshold shifts in a bottlenose dolphin (*Tursiops truncatus*): The effects of noise level and duration. *The Journal of the Acoustical Society of America* 125, 1816-1826.
- Muto, M. M., V. T. Helker, B. J. Delean, N. C. Young, J. C. Freed, R. P. Angliss, N. A. Friday, P. L. Boveng, J. M. Breiwick, B. M. Brost, M. F. Cameron, P. J. Clapham, J. L. Crance, S. P. Dahle, M. E. Dahlheim, B. S. Fadely, M. C. Ferguson, L. W. Fritz, K. T. Goetz, R. C. Hobbs, Y. V. Ivashchenko, A. S. Kennedy, J. M. London, S. A. Mizroch, R. R. Ream, E. L. Richmond, K. E.

- W. Sheldon, K. L. Sweeney, R. G. Towell, P. R. Wade, J. M. Waite, and A. N. Zerbini.. 2022. Alaska Marine Mammal Stock Assessments, 2021. U.S. Department of Commerce, NOAA Tech. Memo. Department of Commerce, NOAA Technical Memorandum NMFSAFSC-441. Available online at <https://media.fisheries.noaa.gov/2022-08/NOAA-TM-AFSC-441.pdf>.
- Nachtigall, P. E., A. Y. Supin, A. F. Pacini, R. A. Kastelein. 2018. Four odontocete species change hearing levels when warned of impending loud sound. *Integrative zoology* 13, 160-165.
- National Institute for Occupational Safety and Health (NIOSH). 1998. Criteria for a recommended standard: Occupational noise exposure. United States Department of Health and Human Services, Cincinnati, OH.
- National Marine Fisheries Service (NMFS). 2024a. Update to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 3.0): Underwater and In-Air Criteria for Onset of Auditory Injury and Temporary Threshold Shifts. U.S. Dept. of Commer., NOAA. NOAA Technical Memorandum NMFS-OPR-71, 182 p.
- NMFS. 2024b. Personal correspondence with Rachel Wachtendonk, NMFS, and Emma Kimball, Solstice Alaska Consulting, Inc. regarding review of IHA application on June 24, 2024.
- NMFS. 2023a. Guidelines for Preparing Stock Assessment Reports Pursuant to the Marine Mammal Protection Act. Protected Resources Policy Directive 02-20401. Available online:<https://www.fisheries.noaa.gov/s3/2023-05/02-204-01-Final-GAMMS-IVRevisionsclean-1-kdr.pdf>.
- NMFS. 2023b. Steller Sea Lion Species Profile. Accessed at <https://www.fisheries.noaa.gov/species/steller-sea-lion> on December 5, 2023.
- NMFS. 2023c. Proxy Recommendations for Southeast Alaska (July 19, 2023).
- NMFS. 2023d. Minke Whale Species Profile. Accessed at <https://www.fisheries.noaa.gov/species/minke-whale> on December 6, 2023.
- NMFS. 2023e. Killer Whale Species Profile. Accessed at <https://www.fisheries.noaa.gov/species/killer-whale#overview> on December 5, 2023.
- NMFS. 2023f. Steller Sea Lion Species Profile. Accessed at <https://www.fisheries.noaa.gov/species/steller-sea-lion> on December 5, 2023.
- NMFS. 2022a. Evaluation of MMPA Stock Designation for the Hawai'i Distinct Population Segment of humpback whales (*Megaptera novaeangliae*), currently a part of the Central North Pacific humpback whale stock. Memorandum for the Record: Management Considerations in Designating Demographically Independent Populations as Stocks under the Marine Mammal Protection Act.
- NMFS. 2022b. Acoustic Guidance for Assessment of Down-the-Hole (DTH) Systems. Accessed at https://media.fisheries.noaa.gov/2022-11/PUBLIC%20DTH%20Basic%20Guidance_November%202022.pdf On April 18, 2023.
- NMFS. 2019. Reviewing and designating stocks and issuing Stock Assessment Reports under the Marine Mammal Protection Act. Protected Resources Policy 02-204-03. Available online: <https://media.fisheries.noaa.gov/dam-migration/02-204-03.pdf>.

- NMFS. 2018. 2018 revision to: technical guidance for assessing the effects of anthropogenic sound on marine mammal hearing (version 2.0). Underwater thresholds for onset of permanent and temporary threshold shifts. Office of Protected Resources Nat. Mar. Fish. Serv., Silver Spring, MD. 167 p.
- NMFS. 2016. Technical guidance for assessing the effects of anthropogenic sound on marine mammal hearing: Underwater acoustic thresholds for onset of permanent and temporary threshold shifts, US Department of Commerce Washington, DC, p. 178.
- NMFS. 2012. Guidance Document: Data Collection Methods to Characterize Underwater Background Sound Relevant to Marine Mammals in Coastal Nearshore Waters and Rivers of Washington and Oregon.
- National Research Council (NRC). 2005. Marine mammal populations and ocean noise/Determining when noise causes biologically significant effects. U.S. Nat. Res. Council., Ocean Studies Board, Committee on characterizing biologically significant marine mammal behavior (Wartzok, D.W., J. Altmann, W. Au, K. Ralls, A. Starfield, and P.L. Tyack). Nat. Acad. Press, Washington, DC. 126 p.
- NRC. 2003. Ocean noise and marine mammals. Washington, DC: National Research Council Committee on Potential Impacts of Ambient Noise in the Ocean on Marine Mammals; The National Academies Press.
- Nedwell, J. and B. Edwards. 2002. Measurements of underwater noise in the Arun River during piling at County Wharf, Littlehampton. Report by Subacoustech, Ltd. to David Wilson Homes Ltd (2002).
- Nowacek, D.P., M.P. Johnson, and P.L. Tyack. 2004. North Atlantic right whales (*Eubalaena glacialis*) ignore ships but respond to alerting stimuli. *Proceedings of the Royal Society of London B: Biological Sciences* 271(1536):227-231.
- Oestman, R., D. Buehler, J. Reyff, and R. Rodkin. 2009. Technical guidance for assessment and mitigation of the hydroacoustic effects of pile driving on fish. Prepared for California Department of Transportation, CALTRANS Compendium, CALTRANS.
- Paxton, A.B., J.C. Taylor, D.P. Nowacek, J. Dale, E. Cole, C.M. Voss, and C.H. Peterson. 2017. Seismic survey noise disrupted fish use of a temperate reef. *Marine Policy* 78: 68-73.
- Pearson, W.H., J.R. Skalski, and C.I. Malme. 1992. Effects of sounds from a geophysical survey device on behavior of captive rockfish (*Sebastes* spp.). *Canadian Journal of Fisheries and Aquatic Sciences* 49:1343-1356.
- Pena, H., N.O. Handegard, and E. Ona. 2013. Feeding herring schools do not react to seismic air gun surveys. *ICES Journal of Marine Science* 70 (6):1174-1180.
- Popper, A. N., A. D. Hawkins, R. R. Fay, D. A. Mann, S. Bartol, T. J. Carlson, S. Coombs, W. T. Ellison, R. L. Gentry, and M. B. Halvorsen. 2014. Effects of Sound Exposure. ASA S3/SC1. 4 TR-2014 Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report prepared by ANSI-Accredited Standards Committee S3/SC1 and registered with ANSI, 17-21.
- Popper, A.N. and M.C. Hastings. 2009. The effects of anthropogenic sources of sound on fishes. *Journal of Fish Biology* 75 (3):455-489.

- Purser, J. and A. N. Radford. 2011. Acoustic noise induces attention shifts and reduces foraging performance in three-spined sticklebacks (*Gasterosteus aculeatus*). *PloS one* 6, e17478.
- Reichmuth, C., Sills, J.M., Mulsow, J., Ghoul, A., 2019. Long-term evidence of noise-induced permanent threshold shift in a harbor seal (*Phoca vitulina*). *The Journal of the Acoustical Society of America* 146, 2552-2561.
- Richardson, W.J., C.R. Greene, C.I. Malme, and D.H. Thomson. 1995. *Marine Mammals and Noise*. Academic Press, Inc., San Diego, CA.
- Ridgway, S., D. Carder, D., J. Finneran, M. Keogh, T. Kamolnick, M. Todd, and A. Goldblatt. 2006. Dolphin continuous auditory vigilance for five days. *Journal of Experimental Biology* 209, 3621-3628.
- Rolland, R. M., S. E. Parks, K. E. Hunt, M. Castellote, P. J. Corkeron, D. P. Nowacek, S. K. Wasser, and S. D. Kraus. 2012. Evidence that ship noise increases stress in right whales. *Proceedings of the Royal Society B: Biological Sciences* 279, 2363-2368.
- Romano, T.A., M.J. Keogh, C. Kelly, P. Feng, L. Berk, C.R. Schlundt, et al. 2004. Anthropogenic sound and marine mammal health: Measures of the nervous and immune systems before and after intense sound exposure. *Canadian Journal of Fisheries and Aquatic Sciences* 61:1124-1134.
- Romano, T.A., D.L. Felten, S.Y. Stevens, J.A. Olschowka, V. Quaranta, and S.H. Ridgway. 2002a. Immune response, stress, and environment: Implications for cetaceans. Pages 253-279 in C.J. Pfeiffer, ed. *Molecular and Cell Biology of Marine Mammals*. Krieger Publishing Co., Malabar, Florida.
- Romano, T., M. Keogh, and K. Danil. 2002b. Investigation of the effects of repeated chase and encirclement on the immune system of spotted dolphins (*Stenella attenuata*) in the eastern tropical Pacific. Administrative Report LJ-02-35C, National Marine Fisheries Service: 37.
- Ruscher, B., Sills, J.M., Richter, B.P., and Reichmuth, C. 2021. "In-air hearing in Hawaiian monk seals: implications for understanding the auditory biology of Monachinae seals," *J Comp Physiol A* 207, 561-573.
- Santulli, A., A. Modica, C. Messina, L. Ceffa, A. Curatolo, G. Rivas, et al. 1999. Biochemical responses of European sea bass (*Dicentrarchus labrax* L.) to the stress induced by offshore experimental seismic prospecting. *Marine Pollution Bulletin* 38 (12):1105-1114.
- Schlundt, C.E., J.J. Finneran, D.A. Carder, and S.H. Ridgway. 2000. Temporary shift in masked hearing thresholds of bottlenose dolphins, *Tursiops truncatus*, and white whales, *Delphinapterus leucas*, after exposure to intense tones. *Journal of the Acoustical Society of America* 107:3496-3508.
- Scholik, A. R. and H. Y. Yan. 2002. The effects of noise on the auditory sensitivity of the bluegill sunfish, *Lepomis macrochirus*. *Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology* 133, 43-52.
- Scholik, A.R. and H.Y. Yan. 2001. The effects of underwater noise on auditory sensitivity of fish. *Proceedings of the Institute of Acoustics* 23(4):27.
- Seyle, H. 1950. Stress and the general adaptation syndrome. *J Brit Med* 1:1383-1392.

- Sills, J.M., K. Parnell, B. Ruscher-Hill, C. Lew, T.L. Kendall, and C. Reichmuth. 2021. Underwater hearing and communication in the endangered Hawaiian monk seal, *Neomonachus schauinslandi*. *Endangered Species Research* 44:61-78.
- Sills, J.M., Ruscher, B., Nichols, R., Southall, B.L., Reichmuth, C., 2020. Evaluating temporary threshold shift onset levels for impulsive noise in seals. *The Journal of the Acoustical Society of America* 148, 2973-2986.
- Skalski, J.R., W.H. Pearson, and C.I. Malme. 1992. Effects of sounds from a geophysical survey device on catch-per-unit-effort in a hook-and-line fishery for rockfish (*Sebastes* spp.). *Canadian Journal of Fisheries and Aquatic Sciences* 49(7):1357-1365.
- Skalski, J. R., W. H. Pearson, and C. I. Malme. 1992. Effects of sounds from a geophysical survey device on catch-per-unit-effort in a hook-and-line fishery for rockfish (*Sebastes* spp.). *Canadian Journal of Fisheries and Aquatic Sciences* 49(7):1357-1365.
- Solstice Alaska Consulting, Inc. (SolsticeAK). 2020. Hoonah Berth II: Final Protected Species Report. Submitted to NMFS and U.S. Fish and Wildlife Service by SolsticeAK in January 2020.
- SolsticeAK. 2018. Hoonah Berth II Test Pile Study: Monitoring Report. Submitted to NMFS by SolsticeAK in May 2018.
- Southall, B. L., Nowacek, D. P., Bowles, A. E., Senigaglia, V., Bejder, L. & Tyack, P. L. 2021. Marine mammal noise exposure criteria: Assessing the severity of marine mammal behavioral responses to human noise. *Aquatic Mammals*, 47, 421-464.
- Southall B. L., Finneran J J, Reichmuth C, Nachtigall P E, Ketten D R, Bowles A E, Ellison W T, Nowacek D P, Tyack P L. 2019. Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects. *Aquatic Mammals* 2019, 45(2), 125-232, DOI 10.1578/AM.45.2.2019.125.
- Southall, B. L., A. Bowles, W. Ellison, J. Finneran, R. Gentry, C. Greene, Jr., D. Kastak, D. Ketten, J. Miller, P. Nachtigall, W. Richardson, J. Thomas, and P. Tyack. 2007. Marine mammal noise exposure criteria: initial scientific recommendations. *Aquatic Mammals* 33:411-521.
- Thorson, P. and J.A. Reyff. 2006. San Francisco-Oakland Bay Bridge East Span Seismic Safety Project: marine mammal and acoustic monitoring for the marine foundations at piers E2 and T1, January-September 2006. Prepared by SRS Technologies and Illingworth & Rodkin, Inc. for the California Department of Transportation, 51 p.
- Urick, R. J. 1983. *Principles of underwater sound*. 3rd ed. McGraw-Hill, New York, NY.
- Wade, P.R. 2021. Estimates of abundance and migratory destination for North Pacific humpback whales in both summer feeding areas and winter mating and calving areas. *International Whaling Commission*. SC/68c/IA/03. 32p. <https://archive.iwc.int/>.
- Wade, P. R., E. M. Oleson, and N. C. Young. 2021. Evaluation of Hawai'i distinct population segment of humpback whales as units under the Marine Mammal Protection Act. U.S. Dep. Commer., NOAA Tech. Memo. NMFS AFSC-430, 31 p.
- Ward, W.D. 1997. Effects of high intensity sound, Pp, 1497-1507 in *Encyclopedia of Acoustics*, MJ Crocker, ed, New York: J. Wiley and Sons, Inc.
- Ward, W.D. 1960. Recovery from high values of temporary threshold shift. *Journal of the Acoustical Society of America* 32:497-500.

- Ward, W.D., A. Glorig, and D.L. Sklar. 1959. Temporary threshold shift from octave-band noise: Application to damage-risk criteria. *Journal of the Acoustical Society of America* 31:522-528.
- Ward, W.D., A. Glorig, and D.L. Sklar. 1958. Dependence of temporary threshold shift at 4 kc on intensity and time. *Journal of the Acoustical Society of America* 30:944-954.
- Wardle, C.S., T.J. Carter, G.G. Urquhart, A.D.F. Johnstone, A.M. Ziolkowski, G. Hampson, and D. Mackie. 2001. Effects of seismic air guns on marine fish. *Continental Shelf Research* 21:1005-1027.
- Wartzok D., A.N. Popper, J. Gordon J., and J.J. Merrill. 2004. Factors affecting the responses of marine mammals to acoustic disturbance. *Marine Technology Society Journal* 37:6-15.
- Wartzok, D., A.N. Popper, J. Gordon, and J. Merrill. 2003. Factors affecting the responses of marine mammals to acoustic disturbance. *Marine Technology Society Journal* 37(4):6-15.
- Wartzok, D., and D.R. Ketten. 1999. Marine mammal sensory systems. pp 117-175 In J.E. Reynolds II & S.A. Rommel (Eds.), *Biology of marine mammals*. Washington, DC: Smithsonian Institution Press.
- Weilgart, L.S. 2007. A brief review of known effects of noise on marine mammals. *International Journal of Comparative Psychology* 201(2-3):159-168.
- Wild, L. A., H. E. Riley, H. C. Pearson, C. M. Gabriele, J. L. Neilson, A. Szabo, Moran, J. M. Straley, and S. DeLand. 2023. Biologically Important Areas II for cetaceans within US and adjacent waters—Gulf of Alaska Region. *Frontiers in Marine Science*, 10, p.763.
- Yazvenko, S.B., T.L. McDonald, S.A. Blokhin, S.R. Johnson, H.R. Melton, M.W. Newcomer, et al. 2007. Feeding of western gray whales during a seismic survey near Sakhalin Island, Russia. *Environmental Monitoring and Assessment* 134(1-3):93-106.
- Young, N. C., A. A. Brower, M. M. Muto, J. C. Freed, R. P. Angliss, N. A. Friday, B.D. Birkemeier, P. L. Boveng, B. M. Brost, M. F. Cameron, J. L. Crance, S. P. Dahle, B. S. Fadely, M. C. Ferguson, K. T. Goetz, J. M. London, E. M. Oleson, R. R. Ream, E. L. Richmond, K. E. W. Sheldon, K. L. Sweeney, R. G. Towell, P. R. Wade, J. M. Waite, and A. N. Zerbini. 2024. DRAFT Alaska marine mammal stock assessments, 2023. U.S. Department of Commerce.
- Young, N.C., A.A. Brower, M.M. Muto, J.C. Freed, R.P. Angliss, N.A. Friday, P.L. Boveng, B.M. Brost, M.F. Cameron, J.L. Crance, S.P. Dahle, B.S. Fadely, M.C. Ferguson, K.T. Goetz, J.M. London, E.M. Oleson, R.R. Ream, E.L. Richmond, K.E.W. Sheldon, K.L. Sweeney, R.G. Towell, P.R. Wade, J.M. Waite, and A.N. Zerbini. 2023. Alaska Marine Mammal Stock Assessments, 2022. Alaska Fisheries Science Center (U.S.) (Ed.). NOAA Technical Memorandum NMFS AFSC; 474. Accessed at <https://repository.library.noaa.gov/view/noaa/52074>.
- Zelick, R., and D.A. Mann. 1999. Acoustic communication in fishes and frogs. In: Fay, R.R. and A.N. Popper, eds. *Comparative hearing: Fishes and amphibians*. Springer-Verlag, New York.
- Zerbini, A. N., J. M. Waite, J. L. Laake, and P. R. Wade. 2006. Abundance, trends, and distribution of baleen whales off western Alaska and the central Aleutian Islands. *Deep-Sea Res. I* 53:1772-1790.